UK College of Agriculture
Natural Resources / Environmental Sciences Planning Initiative

Ad hoc Committee Members

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Bill Fountain, HORT
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Facilitators

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Planning Initiative Charge

"The Natural Resource Initiative Planning Committee is charged with analyzing current limitations and opportunities, as well as recommending future directions in natural resource sciences. The scope of the Committee's planning should encompass graduate and undergraduate instruction, and interdisciplinary research and extension programs. The Committee recommendations may include innovative models to organize and promote interdepartmental synergy in natural resource sciences."
– Memo from Dean Smith, 6/1/07

Planning Initiative Process

- Identify the most important issues and *broad* areas where the College's research, teaching, and Extension programs can and should make a positive difference in natural resources and environmental sciences in the Commonwealth, the region, and beyond during the next 10 years.
- Identify critical *specific* issues within the broad areas identified above.
- Relate the specific issues to programmatic needs in research, teaching, and Extension in the College.
- Identify the College's strengths and weaknesses with respect to natural resources and environmental sciences.
- Develop College-level recommendations involving organization and investment in natural resources and environmental sciences.

This document is based on several committee meetings and a Vision Summit meeting with internal and external stakeholders. The document focuses on:

1) the strengths and weaknesses in the College with respect to natural resources and environmental sciences; and
2) the Natural Resources/Environmental Sciences Planning Initiative recommendations.

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Strengths and Weaknesses with Respect to Natural Resources and Environmental Sciences

STRENGTHS

Support of University Initiative

- **The Provost's initiative to establish an umbrella Environmental Institute is a strength because we have an undergraduate program and many faculty engaged in environmentally-oriented research and outreach activities. What we are doing will allow us to position the College to justify some new hires being in the College because of the fit with our own College's initiative.**

Internal Capacity

- College administration willing to support a new initiative in natural resources and environmental sciences with resources (e.g., staff, faculty).
- Strong academic departments and faculty with successful programs in natural resources and environmental sciences.
- Our emphasis is on conservation and use. We are concerned about natural resources and environmental sciences within a model of sustainable use.
- Willingness to bring in people from other departments and colleges to strengthen research and outreach efforts.
- Strong relationships with powerful stakeholders with interests in sustainable use of agriculture, urban and natural resource ecosystems.
- Faculty working with graduate students in natural resources and environmental sciences.
- Capacity in geospatial analysis as applied to ecosystem analysis.

Research, Instruction, and Extension

- Existing research on natural resources and environmental sciences has been successful on many measures.
- Experience with existing natural resources degree program.
- Established Cooperative Extension Service within which to deliver outreach programs – especially with youth (4-H) and these efforts are supported by a network of non-faculty professional staff.
- Tracy Farmer Center for the Environment, which is in the College of Agriculture, has effective and broad-based outreach educational programs.

WEAKNESSES

Networks and Partnerships

- Identifying other people working in this area can be challenging and limits our ability to optimally develop research and teaching strengths. Without this knowledge of others, it is difficult to develop partnerships or initiatives with other universities, stakeholders, or those with shared interests.
- Institutional barriers limit opportunities to work together on interdisciplinary efforts because:
  - We do not accurately recognize interdisciplinary work within the promotion and tenure process.
  - There are few/no mechanisms to promote interdisciplinary work.
  - The reward system and performance evaluation processes (both individual and departmental) are flawed in how they allocate recognition for interdisciplinary work.

Communication

- Efficient internal communication system related to natural resources and environmental sciences initiatives/programs is lacking within the College.
- A single, visible website presence related to natural resources and environmental sciences programs is lacking.

Resources

- *Within the College* we lack sufficient resources in:
  - Aquatic ecology.
  - Stream restoration and ecology.
  - Watershed and/or urban watershed monitoring, analysis, evaluation.
  - Biodiversity.
  - Population genetic and evolutionary biology.
  - Geospatial technologies (Specialization in remote sensing. Need land analysis laboratory to bring people with similar interests together to use shared resources).
  - Landscape ecology especially the interaction and conflict at the rural/urban interface and urban sprawl.
  - Human dimensions of agriculture, urban and natural resource ecosystems function and integrity (how does knowledge, attitudes and behaviors with respect to the ecosystem interact to create change or inhibit change).
  - Public policy.
  - Ethics.
  - Environmental history.
  - Experimental and demonstration land resources across the physiographic regions.
- *Within the College* we also lack:
  - Broad-based interdisciplinary graduate program in natural resources and environmental sciences.
  - The technology to deliver a broad range of educational outreach programs for agents in this area.
  - A mechanism to receive feedback from the local level as to critical issues and to disseminate these knowledge requests to the board range of faculty and staff with the ability to respond.

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Natural Resources/Environmental Sciences Planning Initiative Recommendations

Recommendation 1 - Natural resources and environmental sciences should be **recognized and valued as a strength** within the College of Agriculture.

Recommendation 2 - Enhance the structure of the College of Agriculture such that it **encourages and rewards interdisciplinary work** in the areas of natural resources and environmental sciences.

Recommendation 3 - Develop a **fund of seed money** to support the development of interdisciplinary grant activities and interdisciplinary outreach efforts.

Recommendation 4 - Create an **Institute for Natural Resources and Environmental Sciences** with the specific goal of improving the College's ability to effectively engage in research, teaching, and Extension programs focused on natural resources and environmental science and comprised of:

(1) a director and staff;
(2) an advisory council consisting of faculty, staff, and external constituents;
(3) committees that will focus on capacity, organization, degree programs, and communication.

The Institute for Natural Resources and Environmental Sciences will report to the Associate Dean for Research, Associate Dean for Academic Programs, and Associate Dean for Extension. (See attached organization chart with vision and mission statements.)

Institute Objectives

Policy

1. Recommend a College policy on how to allocate project overhead funds generated by interdisciplinary contracts and grants.
2. Recommend a College policy for faculty/staff/departmental recognition for those participating in interdisciplinary grants and programs.
3. Develop a metric that values interdisciplinary work and incorporates this into faculty and departmental performance evaluations.

Communication and Partnerships

4. Identify opportunities to bring people together to launch initiatives/working groups to address critical issues (e.g., invasive species, Appalachian Ecosystems) and to obtain intra- and extra-mural funding.
5. Initiate a monthly or bi-monthly informational meeting of both internal and external stakeholders interested in natural resources and environmental sciences to facilitate exchanges of information, shared learning opportunities, and to stimulate emergence of joint research, instruction, and Extension efforts.
6. Develop a comprehensive and integrative web presence to link us internally and provide a central portal for those outside UK to enter in and discover what we do.
7. Identify opportunities for collaboration and ways to overcome structural barriers to collaboration.
8. Effectively involve external advisors/stakeholders in program development, implementation, and advocacy.

Instruction

9. Consider how the existing Natural Resource Conservation and Management undergraduate degree program and any potential new programs would relate to this initiative.
10. Position our instructional program to fit with the new USP requirements and any new non-College undergraduate programs.
11. Establish an interdisciplinary graduate degree in natural resources and environmental sciences by utilizing new and existing courses and faculty.
12. Natural resources and environmental sciences needs to be a component of all degree programs within the College – recognizing and incorporating key concepts into their courses.
13. Define the desired educational outcomes of undergraduate and graduate degree programs.

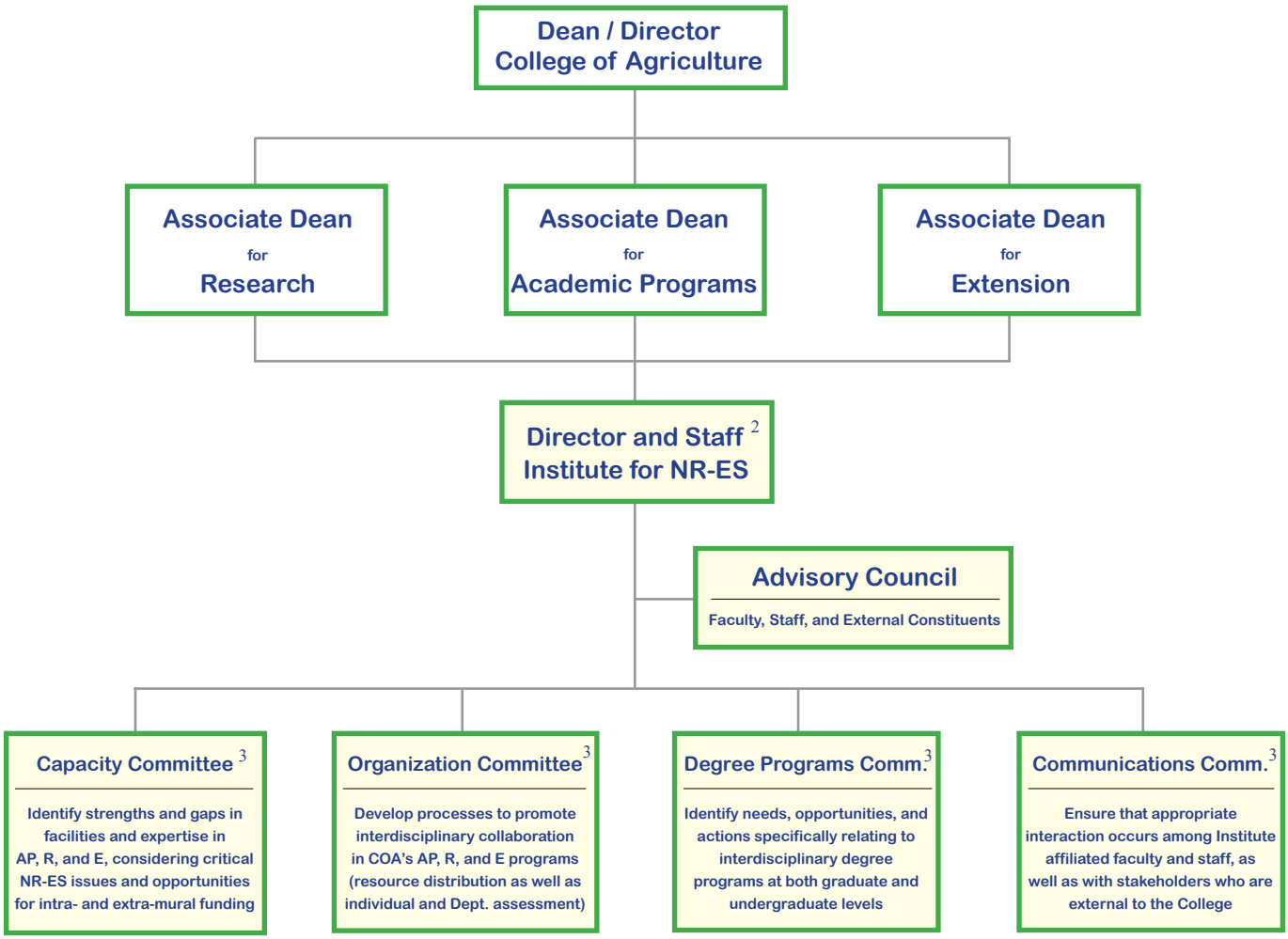
Looking Ahead

14. Assess strengths and weaknesses on a continuing basis in terms of facilities, equipment, and faculty expertise.
15. Conduct a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis on the potential for a School of Natural Resources and Environmental Sciences.

UK College of Agriculture
Institute for Natural Resources and Environmental Sciences

Vision
The College of Agriculture at the University of Kentucky will be nationally/internationally recognized for interdisciplinary research, instruction, and outreach programs that address critical issues involving conservation and sustainable use of natural resources and the environment.

Mission
The Institute for Natural Resources and Environmental Sciences will enhance the sustainable use of agricultural, urban, and natural resource ecosystems, helping to ensure the future viability of their provisioning, regulating, supporting, and cultural services[1] through interdisciplinary basic and applied research, interdepartmental graduate and undergraduate instruction, and through highly collaborative Extension and other engagement activities.



[1] The Millennium Ecosystem Assessment sponsored by the United Nations in 2005 divided ecosystem services into four categories: *provisioning* services such as food, fiber, fuel, timber, wildlife, and genetic resources; *regulating* services that affect climate, floods, drought, and maintenance of air and water quality; *supporting* services such as nutrient cycling, soil formation, photosynthesis, and biodiversity; and *cultural* services such as recreational, aesthetic, and spiritual benefits.

[2] The position of Director should be senior faculty level. A professional staff member will be responsible for day-to-day functions, and will have specific responsibilities in internal and external communication, including website construction/maintenance and working with the Communications Committee to ensure effective internal and external interaction/communication on a continuing basis.

[3] Faculty and professional staff may be directly involved on one or more standing Committees, or on *ad hoc* sub-committees that may relate to specific academic programs, research, and Extension (AP, R, or E) issues. Individuals who are external to the College may also be involved on working committees. Each of the Committees will need to help ensure appropriate interaction with faculty, professional staff, and administration within the College, as well as with appropriate UK and non-UK individuals, agencies, and organizations.

UK College of Agriculture
Institute for Natural Resources and Environmental Sciences
Committee Activities

Capacity Committee[a]

Identify strengths and gaps in facilities and expertise in AP, R, and E, considering critical NR-ES issues and opportunities for intra- and extra-mural funding

Recommend a College policy on how to allocate project overhead funds generated by interdisciplinary contracts and grants.

Identify opportunities to bring people together to launch initiatives/working groups to address critical issues (e.g., invasive species, Appalachian Ecosystems) and to obtain intra- and extra-mural funding.

Effectively involve external advisors/ stakeholders in program development, implementation, and advocacy.

Assess strengths and weaknesses on a continuing basis in terms of facilities, equipment, and faculty expertise.

Conduct a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis on the potential for a School of Natural Resources and Environmental Sciences.

Organization Committee[a]

Develop processes to promote interdisciplinary collaboration in COA's AP, R, and E programs (resource distribution as well as individual and Dept. assessment)

Recommend a College policy on how to allocate project overhead funds generated by interdisciplinary contracts and grants.

Recommend a College policy for faculty/staff/departmental recognition for those participating in interdisciplinary grants and programs.

Develop a metric that values interdisciplinary work and incorporates this into faculty and departmental performance evaluations.

Identify opportunities to bring people together to launch initiatives/working groups to address critical issues (e.g., invasive species, Appalachian Ecosystems) and to obtain intra- and extra-mural funding.

Identify opportunities for collaboration and ways to overcome structural barriers to collaboration.

Degree Programs Comm.[a]

Identify needs, opportunities, and actions specifically relating to interdisciplinary degree programs at both graduate and undergraduate levels

Consider how the existing Natural Resource Conservation and Management undergraduate degree program and any potential new programs would relate to this initiative.

Position our instructional program to fit with the new USP requirements and any new non-College undergraduate programs.

Establish an interdisciplinary graduate degree in natural resources and environmental sciences by utilizing new and existing courses and faculty.

Natural resources and environmental sciences needs to be a component of all degree programs within the College – recognizing and incorporating key concepts into their courses.

Define the desired educational outcomes of undergraduate and graduate degree programs.

Communications Comm.[a]

Ensure that appropriate interaction occurs among Institute affiliated faculty and staff, as well as with stakeholders who are external to the College

Identify opportunities to bring people together to launch initiatives/working groups to address critical issues (e.g., invasive species, Appalachian Ecosystems) and to obtain intra- and extra-mural funding.

Initiate a monthly or bi-monthly informational meeting of both internal and external stakeholders interested in natural resources and environmental sciences to facilitate exchanges of information, shared learning opportunities, and to stimulate emergence of joint research, instruction, and Extension efforts.

Develop a comprehensive and integrative web presence to link us internally and provide a central portal for those outside UK to enter in and discover what we do.

Identify opportunities for collaboration and ways to overcome structural barriers to collaboration.

Effectively involve external advisors/ stakeholders in program development, implementation, and advocacy.

[a] Faculty and professional staff may be directly involved on one or more standing Committees, or on *ad hoc* sub-committees that may relate to specific academic programs, research, and Extension (AP, R, or E) issues. Individuals who are external to the College may also be involved on working committees. Each of the Committees will need to help ensure appropriate interaction with faculty, professional staff, and administration within the College, as well as with appropriate UK and non-UK individuals, agencies, and organizations.